

AMENDMENTS TO THE SPECIFICATION:

At page 1, before line 1, please enter the centered heading: "BACKGROUND OF THE INVENTION"; and, beginning on a new line, please insert:

"This application is a continuation of US Patent Application Serial Number 09/962,297."

At page 2, before line 21, please enter the centered heading: "SUMMARY OF THE INVENTION".

At page 5, after line 30 and before the beginning of the last partial paragraph, please enter the centered heading: "DESCRIPTION OF THE DRAWING FIGURES".

At page 6, after line 20 and before the beginning of the last full paragraph (at line 23), please enter the centered heading: "DETAILED DESCRIPTION OF THE INVENTION".

Please amend the paragraph beginning at line 23 of page 6 as follows:

Fig. 1 is a general view of a known the vertical field type apparatus for the formation of MR images. The apparatus consists of a stand 2 which supports the lower magnetic pole 64 and the upper magnetic pole 46. It is to be noted that in the present context a magnetic pole is to be understood to mean the assembly of associated field generating coils, without it being necessary (but possible) to provide an iron circuit which interconnects the two magnetic poles so as to conduct the magnetic flux. A space for receiving a patient 8 to be examined exists between the magnetic poles. The patient to be examined is arranged on a table top 14 which itself is supported by a support 16 which forms part of the stand 2 so that the patient 8 can be arranged in the correct

position and with the correct orientation between the magnetic poles 4 and 6.

Please amend the paragraph beginning at line 6 of page 7 as follows:

At the side of the patient the magnetic poles are bounded by pole surfaces 10 and 12 which are physically formed as particular surface portions of upper and lower~~by the covers or outer vacuum containers 24a, 24b, respectively, of helium or the~~ cryo containers 22a, 22b, respectively, in which ~~the~~ superconducting magnetic ~~coils~~ coil systems 20a, 20b, corresponding to the upper and lower poles, respectively, are accommodated. The distance between the pole surfaces is chosen to be such that said uncomfortable sensations are counteracted for the patient, but not so large that the production of the magnetic poles becomes much more expensive. It has been found in practice that a distance of from 50 to 60 cm is a suitable value.

Please amend the paragraph beginning at line 12 of page 7 as follows:

Fig. 2 is a sectional view through the magnetic poles 4 and 6, highlighting with the coil systems 20a and 20b in accordance with the invention. The coil systems are each arranged in the cryo containers, 20a, 20b, each of which is further arranged in outer cover or vacuum containers 22a, 22b, respectively. The Figure shows the section of the round coil systems (that is, circular symmetrical systems around a vertical line 15) with the plane of drawing; because of the circular symmetry, this Figure shows only half of the coil systems, but the other half may be assumed to be formed by mirror imaging relative to a plane extending through the line 15 and perpendicularly to the plane of drawing. Between the magnetic poles 4 and 6 there is situated a region 18 in which the

field generated by said magnetic poles is sufficiently homogeneous so as to form MRI images. This region is referred to as the imaging volume of the apparatus. Each of the magnetic poles 4 and 6 includes ~~a~~ field generating superconducting coil ~~system 20~~systems 20a, 20b, respectively, for producing a substantially homogeneous magnetic field in the imaging volume 18 of the apparatus. (The coil system 20a is situated in the upper magnetic pole 4 and the coil system 20b is situated in the lower magnetic pole 6.) As is customary in the case of superconducting coils, the coil systems are accommodated in the upper and lower~~a~~ helium containers, 20a, 20b, respectively, ~~container~~ which as mentioned, ~~are themselves~~itself is enclosed by the~~an~~ covers or outer vacuum containers 24a, 24b, respectively~~container 24~~.

Please amend the paragraph beginning at line 12 of page 7 as follows:

Each of the coil systems includes~~a~~ a round outer ~~coil 28~~coils 28a, 28b, respectively, and ~~a~~ round supplementary ~~coil 30~~coils 30a, 30b, which ~~is~~supplemental coils are situated therewithin, respectively. Both outer and supplementary coils are situated in one flat plane, that is, ~~the~~upper and lower outer coil ~~plane 32~~planes 32a, 32b. The ratio D_a/D_o of the diameter D_a of the supplementary coil to the diameter D_o of the outer coil generally lies between 0.7 and 0.9 and equals 0.8 in the present embodiment. In conformity with the idea of the invention, the distance between the two outer coils 28a and 28b as well as that between the two supplementary coils 30a and 30b can be minimized in this configuration, meaning that the distance between these coils (ignoring the space for the vacuum space, the covers and the radiation shields that are not shown) is substantially equal to the distance between the pole surfaces 10 and 12. The comparatively high costs of said coils can thus be limited to a minimum.